

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-24, 27, 30-32, and 34-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonsson et al. (U.S. Patent 5,513,246), in view of Cheong et al. (U.S. Patent 6,477,151 B1).

For **claim 1**, Jonsson et al. teach a device (combination of 122, 124, 125, 127, and 130 in Fig. 3), for integration into a base station (col. 3, lines 3-4) of a type that includes at least one radio-transceiver (124, 125 -Fig. 3. It is obvious that transmitter and receiver can be combined as transceiver for the functions) for receiving and transmitting radio communications (Fig. 3) to a plurality of subscriber stations (mobile stations, col. 2, lines 33); the device comprising:

an input device (127-Fig. 3) operable to be coupled to the at least one radio-transceiver (125-Fig. 3) for receiving a handoff signal (an alarm is generated to initiate the handoff procedure, refer to col. 11, lines 39-40 & 34-40) from the at least one radio-transceiver at a first mode respective to a first coverage area of the communication system (circle within V –Fig. 1e. Here first mode is respective to a first coverage area that is circle within V. See more below from Cheong);

an output device (122-Fig. 3) for delivering the handoff signal (initiated by the alarm, refer to col. 11, lines 39-40) at a second mode respective to a second coverage area (circle within VII –Fig. 1e. Here second mode is respective to a second coverage area that is circle within VII. See more below from Cheong);

However, Jonsson et al. fail to specifically teach that the device comprising a converter coupled to said input device and said output device for translating the handoff signal from the first mode into the second mode; the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas to switch from the second mode to the first mode so that the subscriber station operates in the first mode.

Cheong et al. teach a converter (305-Fig. 4) coupled to said input device and said output device (Fig. 4) for translating the handoff signal from the first mode into the second mode; the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas to switch from the second mode to the first mode so that the subscriber station operates in the first mode (a micro base station controller for interfacing with a base station controller, performing a ... softer handover process, and up-converting the combined signal into at intermediate frequency ... and conversely down-converting a received cable frequency into the intermediate frequency so that said micro base station controller transmits a packetized message to said base station controller, refer to col. 2, lines 2-14. Also refer to Figs. 1 and 4, and col. 1, lines 57 - 65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jonsson et al. with Cheong et al. to obtain the invention as specified, for performing a softer handoff between cells.

For **claim 2**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1). In addition, Jonsson et al. teach the device according to claim 1 wherein said first coverage area and said second coverage area of said system are each based on a respective protocol selected from the group consisting of CDMA, TDMA, GSM, GPRS, AMPS and FDMA (col. 5, lines 47-55).

For **claim 3**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1). In addition, Jonsson et al. teach the device according to claim 2 wherein said protocols respective to said coverage areas are different (col. 5, lines 47-55).

For **claim 4**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1). In addition, Jonsson et al. teach a conventional CDMA re-direction signal (col. 5, line 55).

For **claim 5**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1 and 4). In addition, Jonsson et al. teach the device according to claim 4 wherein said first coverage area and said second coverage area are served by respective CDMA base stations (col. 5, line 55 & 40-55).

For **claim 6**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1). In addition, Jonsson et al. teach the device according to claim 1 wherein said output device is operable to transmit (Fig. 3) said handoff signal to

a base station power combiner (123-Fig. 3) for delivering said converted handoff signal to a base station antenna (Fig. 3) for outputting said handoff signal.

For **claim 7**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1 and 4). In addition, Jonsson et al. teach the device according to claim 4 wherein said converter comprises a down-converter (receiver, 125-Fig. 3) operable to receive said handoff signal from said input device and for converting said handoff signal from said first frequency to an intermediate frequency (col. 7, line 45) and an up-converter (transmitter, 124-Fig. 3) for converting said intermediate frequency (col. 7, line 45) to said second frequency (the converting and handoff process is the same as described in claim 1).

For **claim 8**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1, 4 and 7). In addition, Jonsson et al. teach the device according to claim 7 further comprising a microcontroller operably connected to said down-converter and said up-converter such that said first frequency and said second frequency is user-selectable (col. 8, lines 18-23).

For **claim 9**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1, 4, 7 and 8). In addition, Jonssen et al. teach generating alarms if said converter operates outside of desired specifications (col. 11, lines 31-40).

However, Jonsson et al. fail to specifically teach the device wherein said microcontroller is further operable to perform at least one of logging various conversions performed by said converter.

Cheong et al. teach the device wherein said microcontroller is further operable to perform at least one of logging various conversions performed by said converter (col. 6, lines 31-38).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jonsson et al. with Cheong et al. to obtain the invention as specified for handling delay of conversions.

For **claims 10-12**, they are method claims corresponding to method claims 1-3, therefore they are rejected for the same reason above.

For **claims 13-14**, they are method claims of claims 4-5, therefore they are rejected for the same reason above.

For **claim 15**, it is a method claim of claim 6, therefore it is rejected for the same reason above.

For **claim 16**, it is a method claim of claim 4, therefore it is rejected for the same reason above.

For **claims 17-20, and 21** they are system (Fig. 1e) claims including first base station (BS1 in Fig. 1e) and second base station (BS2 in Fig. 1e) corresponding to claims 1-4, and 6 respectively, therefore they are rejected for the same reason above.

For **claims 22-24**, they are system claims of claims 7-9, therefore they are rejected for the same reason above.

For **claim 27**, it is a device (Fig. 3) for use in a wireless communication system claim of claim 1, therefore it is rejected for the same reason above.

For **claim 30**, it is a base station (Fig. 3) for use in a wireless communication system (Fig. 1e) claim of claim 1, therefore it is rejected for the same reason above.

For **claim 31**, it is a base station (Fig. 3) for use in a wireless communication system (Fig. 1e) claim of claim 2, therefore it is rejected for the same reason above.

For **claim 32**, it is a base station (Fig. 3) for use in a wireless communication system (Fig. 1e) claim of claim 10, therefore it is rejected for the same reason above.

For **claim 34**, it is a combination of claims 1, 4, and 7, therefore it is rejected for the same reason above.

For **claim 35**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1). In addition, Jonsson et al. teach a base station (Fig. 3) that incorporates the device according to claim 1.

For **claim 36**, it is a base station (Fig. 3) claim of claim 6, therefore it is rejected for the same reason above.

For **claim 37**, it is a base station (Fig. 3) claim of claim 2, therefore it is rejected for the same reason above.

For **claim 38**, it is a base station (Fig. 3) claim of claim 3, therefore it is rejected for the same reason above.

For **claim 39**, it is a base station (Fig. 3) claim of claim 2, therefore it is rejected for the same reason above.

For **claim 40**, Jonsson et al. and Cheong et al. teach everything claimed as applied above (see claim 1, 35 and 39). In addition, Jonsson et al. teach the base station according to claim 39 wherein said base station is a first CDMA base station and

said second coverage area is served by a second CDMA base station different from said first CDMA base station (BS1 and BS2 in Fig. 1e).

Response to Arguments

3. Applicant's arguments, filed 2/27/2008, have been fully considered, and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Cheong et al. (U.S. Patent 6,477,151 B1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WANDA Z. RUSSELL whose telephone number is (571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZR/Wanda Z Russell/
Examiner, Art Unit 2616

/Kevin C. Harper/
Primary Examiner, Art Unit 2616